

EXHIBIT 9

I. INTRODUCTION AND NATURE OF INVOLVEMENT

1. My name is Eric Krause. I have been retained by SM Energy Company ("SM Energy" or "Defendant") in the matter of Chieftain Royalty Company v SM Energy Company (including predecessors, successors, and affiliates), Enervest Energy Institutional Fund XIII-A, L.P., Enervest Energy Institutional Fund XIII-WIB, L.P., Enervest Energy Institutional Fund XIII-WIC, L.P., Enervest Operating, L.L.C., and FourPoint Energy, LLC (collectively, "Defendants"). I have been asked to assess the facts and circumstances surrounding SM Energy's leases, production, and royalty payments in the proposed class area and to render opinions related to class certification in this matter. I have also been asked to respond to the October 5, 2018 reports of Barbara Ley and Daniel Reineke.

II. CREDENTIALS AND INFORMATION REVIEWED

2. I am a Director at Applied Economics Consulting Group, Inc. ("Applied Economics") in Austin, Texas. Applied Economics conducts economic and financial analyses for a wide variety of clients across a number of industries. I have held my role as Director since 2008 and prior to that, I was a Consultant with the same firm from 2003 to 2008. I have an undergraduate degree in Economics from the University of Texas at Austin and a Master of Business Administration degree with a concentration in Finance from the University of Texas at Austin. A copy of my professional resume is attached to this report as Appendix A.
3. I have significant experience with litigation related to the oil and gas industry and the assessment of facts and circumstances in complex litigation. I have been engaged to assist in the analysis of oil and gas royalty and valuation matters on multiple occasions, to review and prepare evaluations of economic damage claims, and present written reports and provide testimony in a subset of these matters. I have served as both a consulting and testifying

expert in multiple matters involving oil and gas royalty matters, as well as played a project management role in numerous other oil and gas matters in which my colleagues were designated as the testifying expert.

4. I have relevant experience in and an understanding of the economic issues present in this matter and both my academic and professional experiences qualify me to present this report. Attached, as Appendix B, is a listing of cases in which I have testified. Applied Economics is being compensated at the rate of \$385 per hour for my work on this matter. This compensation is not dependent in any way upon the outcome of this litigation or upon reaching any particular opinion or conclusion.
5. In the course of my work in this matter, Applied Economics staff and I have reviewed documents and materials produced by the parties in discovery. I have also procured and reviewed information from public sources. A listing of all these materials is attached to this report as Appendix C. If any additional relevant or supplemental information or data becomes available to me, I will supplement this report as appropriate.

III. BACKGROUND

Plaintiff

6. I understand Chieftain Royalty Company ("Chieftain" or "Plaintiff") is an owner in certain Oklahoma wells and has a "right to their proportionate share of the royalty proceeds from Defendants' sales."¹ More specifically, I understand the Plaintiff is an owner by virtue of being the current lessor in the Wilt 1-10, Hicklin 1-28, McDaniel 1-8, Duncan Shores 1-1, Duncan Shores 2-1, Avanzini 3-1H, and Simmons 3-32 wells.² Additionally, Plaintiff owns in

¹ Third Amended Complaint, dated February 21, 2017.

² Third Amended Complaint, dated February 21, 2017. The Duncan Shores 1-1, Duncan Shores 2-1, and Avanzini 3-1H are all located in Coal County. The remaining wells are located in Caddo (Wilt 1-10), Washita (Hicklin 1-28), Roger Mills (McDaniel 1-8), and Beckham Counties (Simmons 3-32).

the Edward 1-19, Brown 1-26, Opitz 1, Haley 1, Haley 2-31, Haley 3-31, Haley 4-31, and Hart 1-31 wells by being a member of the royalty pool, sharing in royalty from gas marketing by Defendants. It is my understanding as well that Chieftain has never actually been paid any royalties for any interests in Coal County during the proposed class period.³

Defendants

7. SM Energy Company is an independent exploration and production company headquartered in Denver, CO.⁴
8. Enervest Energy Institutional Fund XIII-A, L.P., Enervest Energy Institutional Fund XIII-WIB, L.P., Enervest Energy Institutional Fund XIII-WIC, L.P., and Enervest Operating, L.L.C. (collectively, "Enervest") is an independent oil and gas company headquartered in Houston, Texas consisting of multiple foreign limited partnerships and a limited liability company.⁵
9. FourPoint Energy, LLC ("FourPoint") is a private exploration and production company headquartered in Denver, Colorado with field offices located throughout western Oklahoma and the Texas Panhandle.⁶

Timeline

10. Chieftain originally filed this suit in the Oklahoma State Court in Beaver County, Oklahoma on January 27, 2011.⁷ The case was removed to the United States District Court for the Western District of Oklahoma on February 22, 2011. Chieftain withdrew its Motion for Class Certification after The Tenth Circuit Court of Appeals' November 8, 2012 rulings on two

³ CONFIDENTIAL –SM.016263 – SM.016273.

⁴<http://www.sm-energy.com>.

⁵ <http://www.enervest.net>.

⁶ <http://www.FourPointenergy.com>.

⁷ Plaintiff's Petition, dated January 27, 2011.

similar cases, reversing the lower courts' certification orders and remanding the cases back to their respective District Courts.

11. In a press release dated November 5, 2013, SM Energy announced an agreement with Enervest to sell all of its properties in the Anadarko Basin for cash proceeds of approximately \$343 million.⁸ This divestiture represented approximately 75% of SM Energy's Oklahoma leasehold acreage. Following the acquisition of SM Energy's Anadarko Basin properties, Enervest subsequently sold 50% of the acquired interests to FourPoint.⁹
12. On September 14, 2014, Chieftain filed a Second Amended Complaint, this time adding Enervest and FourPoint as additional defendants alongside SM Energy. Shortly thereafter, Chieftain engaged in settlement discussions with Enervest and FourPoint culminating with a settlement agreement dated August 5, 2015. It is my understanding that Enervest settled all claims relating to Chieftain's interest in all the wells specified in the 2014 Complaint.
13. Chieftain filed its Third Amended Complaint on February 21, 2017 to bring claims pertaining to certain wells outlined above that were not sold to Enervest and in which Chieftain purports to own royalty interests.¹⁰ It is my understanding that Enervest settled all claims relating to Chieftain's interest in all the wells specified in the Third Amended Complaint except for the four wells added by the Third Amended Complaint.
14. Chieftain acquired royalty interests in the Duncan Shores #1-1, Duncan Shores #2-1, and the Avanzini #3-1H wells in Coal County, Oklahoma on May 28, 2015 by virtue of a Mineral Deed between Chieftain Royalty Company and Pagosa Resources, LLC ("Pagosa").¹¹ Pagosa acquired its mineral interest from Michael J. Weeks by mineral deed dated November 7,

⁸ SM Energy - SM Energy Enters into Agreement to Divest Anadarko Basin Assets, November 5, 2013, sm-energy.com.

⁹ FourPoint Energy and EnerVest Agree to Partner in the Anadarko Basin, January 20, 2014, PNRnewswire.com.

¹⁰ Third Amended Complaint, dated February 21, 2017.

¹¹ CHIEFTAIN-SM 002088.

2013.¹² Of note, this 2013 mineral deed specifies that Pagosa can only receive monies of any nature accrued from and after January 1, 2014, potentially limiting Chieftain's potential scope of underpaid royalties on these three wells dating back to January 1, 2014.¹³ Moreover, it is my understanding that Chieftain did not receive any actual royalty proceeds from SM Energy related to these three wells during the class period, and that in purchasing the interest from Pagosa, it contends it gained the rights to any legal claims beginning January 1, 2014.

15. Bravo Natural Resources purchased SM Energy's interest in all of SM Energy's Coal County leases and wells effective March 1, 2015. Therefore, Chieftain's mineral interest was not effective under SM Energy's ownership in the lease. It is also my understanding that Chieftain attempted to work around potential issues with its adequacy as class representative by entering into a June 7, 2018 Quitclaim Mineral Deed with Michael J. Weeks 6 years after this matter was filed, and effective May 28, 2015. Assuming this Quitclaim is proper, it is my understanding that Chieftain's claims would extend back to April 1, 2010 but not to the date of first production under the original lease.¹⁴

16. In addition to the Coal County wells, Chieftain contends it acquired a mineral interest in the Simmons 3-32 well located in Beckham County, Oklahoma by virtue of a Mineral Deed dated January 17, 2015 between Chieftain and CSW Corporation ("CSW Corp").¹⁵ The rights transferred to Chieftain, however, relate to income received after January 17, 2015. Even the prior owner, CSW Corp., only acquired a mineral interest effective January 1, 1996, as stipulated in the Mineral Deed dated May 8, 1996 from Firebird Energy Corporation Royalty Program Limited Partnership A to CWS Corp.¹⁶ Furthermore, I have been informed by

¹² CHIEFTAIN-SM 002083.

¹³ CHIEFTAIN-SM 002083.

¹⁴ See Expert Report of Kris Terry, dated December 4, 2018.

¹⁵ CHIEFTAIN-SM 002098.

¹⁶ CHIEFTAIN-SM 002095. Page 2 of the Mineral Deed states, "Assignee shall be entitled to all income of any kind or character attributable to the interests described on Exhibit "A" hereto received after January 1, 1996, regardless of the

Counsel that SM Energy's interest in the Simmons 3-32 well was sold to OneOk Resources Company on September 1, 1998.¹⁷ I further note that in their reports, the Plaintiff's experts did not put forth any opinions regarding royalty owners or wells outside of Coal County. Based on the alleged impropriety of Chieftain's Quitclaim Deed with Weeks, the duration of Chieftain's interest in its Coal County lease, and the fact that Chieftain has not received payments from SM Energy relating to the Coal County wells, it is unclear how Chieftain would make an adequate class representative.

IV. SUMMARY OF PLAINTIFF'S CLAIMS

17. In the Plaintiff's Third Amended Complaint, Plaintiff enumerates several causes of action that are all generally predicated on an alleged underpayment of royalties.¹⁸ Based on my review of the Plaintiff's Third Amended Complaint and the expert reports of Alyce Hoge, Barbara Ley, and Daniel Reineke, it is my understanding that the Plaintiff's claims can be encapsulated in the following allegations:

- a) Improper deductions;
- b) Failure to pay royalties on all volumes;
- c) Failure to pay royalties on Drip Condensate; and
- d) Insufficient or improper reporting.

18. The Plaintiff seeks to have these claims adjudicated as a class action. The proposed class as described in Plaintiff's expert reports consists of:¹⁹

date of accrual or date of production." Exhibit A to the Mineral Deed does not list the Simmons #3-32, but rather the Apache-Preston Terry well in Section 32.

¹⁷ SM.338000A. See the Sold To Name and Sold Date columns in cells P188 and Q188.

¹⁸ Third Amended Complaint, dated February 21, 2017.

¹⁹ It is worth noting that the class definition as stated in Plaintiff's expert report differs from the class definition as defined in Plaintiff's Third Amended Complaint, dated February 21, 2017. It is my understanding that the Third Amended Complaint is the most recent iteration of the Complaint filed by the Plaintiff.

"All non-excluded persons or entities who are or were royalty owners in SM's 126 Coal County Gas Gathering System wells where SM ENERGY COMPANY is or was the operator (or, as a non-operator, SM Energy separately marketed gas). The Class Claims relate only to payment for gas and its constituents (residue gas, natural gas liquids, and drip gas) produced from the wells for production months October 2001 through May 2015. The Class does not include overriding royalty owners or other owners who derive their interest through the oil and gas lessee.

*The persons or entities excluded from the Class are: (1) agencies, departments or instrumentalities of the United States of America and the State of Oklahoma; (2) publically traded oil and gas exploration companies and their affiliates; and (3) persons or entities that Plaintiff's counsel is, or may be prohibited from representing under Rule 1.7 of the Oklahoma Rules of Professional conduct."*²⁰

19. The proposed class as described in Plaintiff's most recent complaint consists of:

"All non-excluded persons or entities who are or were royalty owners in Oklahoma wells where: (1) SM ENERGY (including its predecessors or affiliates) is or was the operator (or, as a non-operator, SM ENERGY separately marketed gas); (2) ENERVEST is or was the operator (or, as a non-operator, ENERVEST separately marketed gas) in wells ENERVEST acquired from SM ENERGY pursuant to the Purchase & Sale Agreement dated November 4, 2013; or (3) FOURPOINT is or was the operator (or, as a non-operator, FOURPOINT separately marketed gas) in wells FOURPOINT acquired from ENERVEST pursuant to the acquisition between ENERVEST and FOURPOINT on or about

²⁰ Expert Report of Daniel Reineke, dated October 5, 2018 and Expert Report of Barbara Ley, dated October 5, 2018.

January 30, 2014 that ENERVEST acquired from SM ENERGY pursuant to the Purchase & Sale Agreement dated November 4, 2013. The Class Claims relate only to payment for gas and its constituents (helium, residue gas, natural gas liquids, nitrogen and condensate) produced from the wells. The Class does not include overriding royalty owners or other owners who derive their interest through the oil and gas lessee.

*The persons or entities excluded from the Class are: (1) agencies, departments or instrumentalities of the United States of America and the State of Oklahoma; (2) publicly traded oil and gas exploration companies and their affiliates; and (3) persons or entities that Plaintiff's counsel is, or may be prohibited from representing under Rule 1.7 of the Oklahoma Rules of Professional conduct."*²¹

20. The Plaintiff is seeking to have itself appointed as the proposed class representative. It is the Plaintiff's contention that proving the claims of itself will prove and extend to the claims of the class as a whole.²²
21. The parameters in the Plaintiff's class definition, whether as defined by its experts or in its operative complaint, in this matter will require a detailed analysis and factually intensive inquiries on an individualized basis. Additionally, there may be legitimate disputes over the results of such inquiries that may require a legal or factual resolution.

V. CONSIDERATIONS FOR CLASS CERTIFICATION

22. Determining whether a royalty underpayment occurred in any period requires a bifurcated inquiry with regard to each individual potential class member:
 - a) How royalty should have been paid?

²¹ Third Amended Complaint, dated February 21, 2017.

²² Third Amended Complaint, dated February 21, 2017.

b) How royalty was paid?

23. As will be examined throughout this report, the facts in this matter demonstrate that addressing these two inquiries requires an owner-by-owner analysis on a period-by-period basis. Resolving the above inquiries regarding the named plaintiff (and thereby the royalty underpayment claims) will not and cannot answer the question of whether a royalty underpayment has occurred with regard to all other class members.
24. In order to address these questions, it is necessary to investigate and analyze: the physical, economic, and geographic characteristics of the wells; the marketing arrangements from those wells over time; and how the royalty was actually valued and paid over time, with regard to production from a particular well *and* with regard to each particular owner in each well. Further, it is necessary to analyze each lease or other potential contractual instruments that create each owner's obligation to determine what the royalty standard is for each respective owner in relation to the aforementioned facts and circumstances about each well and production from that well. Additionally, if there is a standard of market value at a particular location referenced in the lease (or other instrument), then a market value analysis on the gas produced from the well in question would have to be performed.
25. It is my understanding that certain threshold requirements must be met for a class to be certified. These include numerosity, commonality, typicality, predominance, superiority, manageability, and adequacy of representation. I consider these requirements in the context and as part of the following discussion regarding the facts and circumstances of the leases, gas production quality, marketing arrangements, and the actual payments to putative class members involved in this matter.

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26. The Plaintiff, Mr. Reineke, and Ms. Ley enumerate numerous issues or questions that they have deemed common for all royalty owners in the putative class.²³ As it relates to the issue of commonality and whether any of the questions are common, I have been asked to assume the applicable standard is that the claims brought by the Plaintiff must be predicated on a common contention. This common contention must be capable of a class-wide resolution and, by extension, determination of its truth or falsity with respect to the class representative will resolve an issue that is essential to the legitimacy of each of the claims for every class member in one stroke. I have incorporated this assumption into the following sections as well.
27. I have evaluated the facts and circumstances surrounding the SM Energy Defendant's leases, gas production and marketing, and payments to putative class members involved in this matter by reviewing the documents produced by both parties, including but not limited to land documents, exemplar leases, marketing contracts under which the gas at issue was sold, and accounting pay history to the royalty owners related to the gas produced from Defendant's Oklahoma operated wells at issue in this matter.

VI. HOW ROYALTY SHOULD HAVE BEEN PAID?

Oil and Gas Leases

28. Oil and Gas leases are land contracts that itemize the numerous agreements made between the mineral rights owner (lessor) and what ultimately become the producers (lessee). Leases are the primary instruments creating and outlining the actual royalty payment obligations. However, it is important to note that other land contracts or even regulations may do the

²³ Third Amended Complaint, dated February 21, 2017; Expert Report of Daniel Reineke, dated October 5, 2018, page 32; Expert Report of Barbara Ley, dated October 5, 2018, page 8.

same. Leases between the Defendant and the more than 4,800 royalty owners²⁴ (most of which would be a part of this potential class) are diverse in the language that is relevant to the Plaintiff's claims.²⁵ A substantial portion of the leases provide specific language regarding the basis on which the royalty value methodology should be calculated (such as "market value" or "proceeds") in addition to the royalty valuation point (such as the wellhead).

29. Additionally, numerous types of leases also provide explicit language regarding the types of deductions (*e.g.*, gathering, compression, or transportation) that are allowable or disallowable for purposes of calculating and paying royalty to that owner under that particular lease. The language existing in the various leases can reflect and shed light on the gas disposition environment at the time each lease was negotiated and executed by the parties.
30. The potential members of the proposed class also diverge in terms of their familiarity and sophistication in the oil and gas industry and their likely familiarity with lease language and the nature of the gas market in the State of Oklahoma. As an example, royalty owners who are also privately held working interest owners and similarly situated sophisticated industry royalty owners are not currently excluded as members of the putative class.²⁶
31. Within the relevant leases to this matter there is substantial diversity in the royalty payment clauses that range from very defined and explicit to very general regarding how one should calculate royalties.²⁷ The leases in discovery in this matter illustrate the diversity of lease forms containing a wide variety of royalty payment standards across the class even after

²⁴ SM.016263 – SM.016273.

²⁵ See Expert Report of Kris Terry, dated December 4, 2018.

²⁶ The owners comprising this group may be lessors under executed oil and gas leases or may be unleased mineral owners.

²⁷ See Expert Report of Kris Terry, dated December 4, 2018. See, also, Plaintiffs Exhibits 28.

taking into account the excluded terms in the class definition.²⁸ Each lease must be individually considered in its totality and in concurrence with the gas composition and marketing arrangements applicable to each well in each period for purposes of properly discerning the royalty payment obligation for each potential class member. A few exemplars of the various royalty payment obligations within Defendant's leases are further discussed below.

32. Plaintiff contends it has acquired an interest in a lease dated September 16, 2005 between Evert L. Spears and Shirley R. Spears as Lessors and St. Mary Land & Exploration Company, governing production from the Duncan Shores 1-1, Duncan Shores 2-1, and Avanzini 3-1H wells in Coal County, Oklahoma.²⁹ The Spears lease contains the following language:

"2nd. To pay lessor for gas of whatsoever nature or kind (with all of its constituents) produced and sold or used off the leased premises, or used in the manufacture of products therefrom, ¼ of the gross proceeds received for the gas sold, used off the premises, or in the manufacture of products therefrom, but in no event more than ¼ of the actual amount received by the lessee, said payments to be made monthly...

*3rd. To pay lessor for gas produced from any oil well and used off the premises, or for the manufacture of casing-head gasoline or dry commercial gas, ¼ of the gross proceeds, at the mouth of the well, received by lessee for the gas during the time such gas shall be used, said payments to be made monthly."*³⁰

²⁸ See Expert Report of Kris Terry, dated December 4, 2018. See, also, Third Amended Complaint, dated February 21, 2017.

²⁹ Third Amended Complaint, dated February 21, 2017, pages 9 through 13.

³⁰ Third Amended Complaint, dated February 21, 2017, Exhibit 1.

33. The Mamie Simmons Lease, in which the proposed class representative's lease claims to own an interest and govern production from the Simmons 3-32 well in Beckham County, Oklahoma contains the following language:

"2nd. To pay lessor for gas of whatsoever nature or kind (with all of its constituents) produced and sold or used off the leased premises, or used in the manufacture of products therefrom, one-eighth (1/8) at the market price at the well for the gas sold, used off the premises, or in the manufacture of products therefrom, said payments to be made monthly...

*3rd. To pay lessor for gas produced from any oil well and used off the premises, or for the manufacture of casing-head gasoline or dry commercial gas, one-eighth (1/8) of the proceeds, at the mouth of the well, at the prevailing market rate for the gas during which time such gas shall be used, said payments to be made monthly."*³¹

34. As seen in the quoted sections above, the proposed class representative's two leases alone contain the sort of language variety that requires an individualized approach into the payment methodology not just for a specific owner, but also of a specific well for each member of the proposed class. The Coal County lease contains express language regarding the valuation methodology for gas while the Beckham County lease requires a market price for paying royalty on gas. Furthermore, the Beckham County lease also defines a valuation location of "at the well" for said market price, a secondary nuance distinguishing it from the proposed class representative's Coal County lease. I also note that the Coal County lease establishes a location based valuation for gas produced from wells classified as oil wells.³²

³¹ Third Amended Complaint, dated February 21, 2017, Exhibit 2.

³² However, the named plaintiff's wells are classified as gas.

35. There are some leases within the proposed class with specific language establishing the location of the royalty payment obligation. For example, the June 29, 1972 lease between Helen Rummell Symonds, Trustee as Lessor and H.W. Collier as Lessee states:

*"On gas, gas condensate, gas distillate, casinghead gas and all other gases, including their constituent parts, produced from said land and sold or used off the lease premises or in the manufacture of gasoline or other products, lessee shall pay lessor a sum equal to one-eighth (1/8th) of the gross proceeds received from the sale of such produced substances where the same is sold at the mouth of the well or, if not sold at the mouth of the well, then one-eighth of the market value thereof at the mouth of the well but in no event more than one-eighth (1/8th) of the actual amount by lessee for the sale thereof."*³³

36. The quoted section above describes a two prong methodology depending on the location of where gas is sold. The royalty methodology for gas changes to a calculated "market value" when the gas is "not sold at the well," while gas that is sold at the mouth of the well is computed as "gross proceeds."

37. Additionally, there are leases that contain the terminology "raw gas." For example, the August 18, 1960 lease between Wilbur J. Holleman as Lessor and Tennessee Gas Transmission Company as Lessee states:

"...And where gas only is found, one-eighth of the value of all raw gas at the mouth of the well, while said gas is being used or sold off the premises, payment for gas so used or sold to be made monthly..., payment for gas so used or sold to be made monthly..."

³³ 482508AA_LEASE.

*...To pay lessor for gas produced from any oil well and used off the premises
one-eighth of the value of the raw gas at the mouth of the well..."³⁴*

38. This lease not only establishes a clear valuation location "at the mouth of the well," but further identifies the product to be valued as "raw gas."
39. There are leases that contain more descriptive language in addition to language regarding certain deductions. For example, the June 14, 2002 lease between Edwin P. Kerr, Jr. and Jeanette A. Kerr, Trustees of the Kerr Living Trust as Lessor and Rob Featherstone, as Lessee states:

"B. To pay Lessor for gas of whatsoever nature or kind (with all of its constituents) produced and sold or used off the leased premises, or used in the manufacture of products therefrom, three-sixteenths (3/16) of the gross proceeds received by Lessee from the sale of such produced substances where the same is sold at the mouth of the well, or if not sold at the mouth of the well, then three-sixteenths (3/16) of the market value thereof at the mouth of the well, but in no event more than three-sixteenths (3/16) of the net proceeds of the sale thereof, (which shall be the amount realized from such sales less cleaning, sweetening, compressing, dehydrating, separating, gathering and transporting, and other costs necessary to render it marketable pipeline gas, hereinafter referred to as "improvement expenses")...

C. To pay Lessor for gas produced from any oil well and used off the premises, or for the manufacture of casinghead gasoline or dry commercial gas, three-

³⁴ 484828D_LEASE.

sixteenths (3/16) of the gross proceeds, at the mouth of the well, received by Lessee for the gas during the time such gas shall be used.”³⁵

40. There are also leases containing language that expressly prohibits the lessee from taking any deductions from its gross proceeds, other than taxes. For example, the July 10, 2006 lease between Simone Vaughn, et al, as Lessor and St. Mary Land and Exploration Company as Lessee states:

“2nd. To pay lessor for gas of whatsoever nature or kind (with all of its constituents) produced and sold or used off the leased premises, or used in the manufacture of products therefrom, ¼ of the gross proceeds received for the gas sold, used off the premises or in the manufacture of products therefrom, but in no event more than ¼ of the actual amount received by the lessee...

3rd. To pay lessor for gas produced from any oil well and used off the premises, or for the manufacture of casing-head gasoline or dry commercial gas, ¼ of the gross proceeds, at the mouth of the well, received by lessee for the gas during the time such gas shall be used, said payments to be made monthly...

Exhibit “A”

1. The royalty payable under this lease shall be calculated to all oil (including but not limited to condensate and distillate) and gas (including casinghead gas) and shall be paid on the gross proceeds sold, less a proportionate part of the applicable severance and/or excise tax or tax of similar nature. Lessors royalty interest shall be free from the cost of selling, producing, gathering, storing, separating, treating, dehydrating, compressing, processing, transporting, and

³⁵ 484836AR_LEASE.

marketing said oil and gas, condensate, distillate, and any other substance covered hereby."³⁶

41. These are mere examples of the different language present in the leases across the class that provide the methodology for which the royalties are to be calculated. Differences in lease terms can and do exist not only between wells, but among owners within a single well.³⁷ Further, a single owner can also have multiple leases governing multiple wells with differing royalty payment terms.³⁸
42. For leases that provide for a market value at the well standard (or any location), an individualized, fact-intensive inquiry will be necessary in order to determine how royalty should have been paid. Determination of market value at the well for one well does not necessarily determine market value at the well for other wells. Any number of factors could affect such a determination of market value, such as the gas composition of the gas produced from the well, which is a physical characteristic that one would need to understand when evaluating the royalty payment obligation and the actual royalty payment performance. Similarly, geographic differences in the location of wells can have a widely diverging bearing on the market value of the gas produced from those wells.
43. It is my understanding that lease obligation diversity was a key consideration for the Oklahoma State Court of Appeals in their decision to deny class certification in the *Strack v. Continental* and *Whisenant v. Strat Land* matters.³⁹ For example, in its decision in the *Continental* matter, the Court stated: "[e]ach of the types of royalty provisions will require a

³⁶ 492548_LEASE

³⁷ For example, there are 95 owners who have a royalty interest in the McKinney 1-12 well and there are at least eight different lease forms defining the royalty payment methodology for the McKinney 1-12 well.

³⁸ As referenced above, the terms defining royalty payment obligation for the Plaintiff's Duncan Shores 1-1, Duncan Shores 2-1, and Avanzini 3-1H wells differ from the terms contained in their lease governing the Simmons 3-32 well.

³⁹ Billy J. Strack, et al., Appellees, vs. Continental Resources, Inc., Appellant, In the Court of Civil Appeals of the State of Oklahoma, No. 114,102 and Tony R. Whisenant, Appellee, vs. Strat Land Exploration Co, Appellant, In the Court of Civil Appeals of the State of Oklahoma, No. 115,660.

different inquiry to determine a Class Members' claim for underpayment of oil or gas royalties. The determination of what was actually required to be paid versus what Continental ultimately paid will be different for each Class Member depending on particular lease language." I note that the facts and circumstances in those matters as they related to lease diversity and class certification considerations are directly parallel to those existing in this matter.

44. The gas composition of the production from any well includes both the hydrocarbon components and inert components present in the production from that well. The Btu factor (which measures the heating capability of the gas stream) can be suggestive of the gas composition for any particular well. The hydrocarbon components that may be present in the gas stream (besides methane) include ethane, propane, iso butane, normal butane, and pentanes plus as entrained, potentially liquefiable components. The respective products ranging from ethane (generally the lighter product) to pentanes plus (generally the heavier product) can potentially be processed into their liquid form known as natural gas liquids or "NGLs." The proportion of these products to other products in the stream is generally conveyed as a percentage of the stream as the number of gallons per thousand cubic feet or "GPM" present in the stream, with a relatively low GPM indicating a "dry" stream and a relatively high GPM indication a "wet" stream. Additional components and products, such as inerts like carbon dioxide, are also expressed as a percentage of the gas stream.
45. The gas composition for wells in which the proposed Class Representative owns an interest had the following ranges and characteristics as measured in March 2013:⁴⁰
- a) Btu factor: 1.047 – 1.110;
 - b) GPM: 2.00 – 3.48;

⁴⁰ See Expert Report of Kyle Pearson, dated December 4, 2018.

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46. Gas composition observed in various other class wells ranged as follows:⁴¹
- a) Btu factor range: 0.961 – 1.293;
 - b) GPM range: 0.16 – 6.85;
47. The above ranges are substantial in their diversity and the various gas composition can have a direct impact on the potential proceeds and market value of the gas at the wells.
48. The leases and their respective royalty obligations that are present in this matter are not common and, by extension, any of the claims made by the Plaintiff on a class-wide basis are not common. Moreover, the claims of the proposed class representative Chieftain Royalty Company, which are, at least partially, driven by the language in its leases, are not typical of the claims of the putative class. As a consequence of the differing provisions among the leases at issue in this matter, the proposed class representative has interests that are contrary to the interests of other purported class members which could possibly give rise to intra-class antagonism. An individualized inquiry at the owner/lease level is necessary in order to determine the royalty obligation for each owner in each well and, as illustrated in the Chieftain leases, this must be performed in conjunction with an inquiry into the actual gas disposition in any given month.

VII. HOW WAS ROYALTY PAID?

49. In its Complaints, the Plaintiff contends SM Energy ultimately paid its royalty owners a net value derived from the proceeds after deducting mid-stream service fees from the gross value of the gas and its constituents.⁴² In evaluating the underlying calculations that result in the royalty prices paid to the proposed class members, I considered both the Defendant's

⁴¹ See Expert Report of Kyle Pearson, dated December 4, 2018.

⁴² Third Amended Complaint, dated February 21, 2017, page 21 and Expert Report of Barbara Ley, dated October 5, 2018., page 8.

royalty payment practices and the pertinent facts and circumstances surrounding the wells, marketing arrangements, and revenue accounting.

Coal County Wells and Gas Production

50. There are approximately 126 Coal County wells in which SM Energy had an interest at issue in this matter that produced gas over the relevant period.⁴³ The physical characteristics described below are highly relevant to both how the royalty was paid, as well as how the royalty should have been paid. In and of themselves, the wells have a diverse range of characteristics, including:

- a) Well classification;⁴⁴
- b) Year Drilled;
- c) Gas Composition;
- d) Geographic distribution;⁴⁵ and
- e) On-lease equipment and gas handling operations.⁴⁶

Coal County Gas Disposition and Sales

51. As discussed above, the Defendant acquired the Coal County wells and gathering system effective October 2001. The gas produced from wells in Coal County operated by the Defendant or that the Defendant has operated during the relevant time period was largely marketed under an affiliate contract between Four Winds Marketing, LLC (herein, "Four Winds") and St. Mary Land Exploration Company that was originally inherited through the

⁴³ SM.016263 – SM.016273.

⁴⁴ Certain leases have a royalty payment obligation for gas well gas that is separate and distinct from casinghead gas or gas from an oil well and others do not. Knowing the well classification will be necessary to apply the appropriate royalty provision.

⁴⁵ The class wells are all located within Coal County, however the relative location of each well to the first point of sales can vary significantly.

⁴⁶ Based on discussions with Kyle Pearson.

acquisition but was then altered numerous times over the class period.⁴⁷ Defendant was, and continues to be, an active seller in the Oklahoma wellhead market.

52. The pricing terms under SM Energy's Coal County marketing arrangement reflected the value of the gas at the point or location that the title transferred (at the well) and by which Defendant was paid for that sale.⁴⁸ The marketing arrangement for any particular well in any given month will have a direct impact on the way royalty was calculated and paid to the members of the class. The volumes that are booked in conjunction with the revenue recorded for a well demonstrate the measured or allocated sales volume of gas at the various sales locations. As noted above, the location in this matter at which SM Energy recorded its sales volume is the "wellhead," or more precisely at the meter contracted for as the gas exits the leased premises and is delivered into the first connected pipeline.

Royalty Valuation Methodology through June 2011

53. SM Energy's predecessor, St. Mary's Land & Exploration Company, acquired the Coal County Gathering System effective October 1, 2001, assuming all purchase and sales contracts in effect at the time and subsequently entering into new contracts itself.⁴⁹ SM Energy inherited marketing arrangements and employed a revenue accounting procedure which called for Working Interests, Overrides, and Royalty Interest owners to all be paid the same for a given well.
54. From the effective date of acquisition from St. Mary's through November 2003 production, monthly prices were based on the Reliant Energy ("Reliant") pipeline system index price in the "Prices of Spot Gas Delivered to Pipelines" table in the first issue of the Inside F.E.R.C.'s

⁴⁷ SM003146.

⁴⁸ These sales occurred exclusively at the wellhead. It is worth noting that the term "wellhead sales" in the natural gas industry vernacular includes sales made at meters into the first-connected pipelines, which are typically located close to the actual wellhead.

⁴⁹ Deposition of Thomas Ferguson, May 8, 2012.

Gas Market Report, less the actual gathering fees and gathering fuel percentage assessed by Reliant, less 20% or 15% of the remaining value depending on the vintage of the well's first production.⁵⁰ Beginning in December 2003, all wells were subject only to the 15% retention with the same monetary deductions as described above. However, the third-party Centerpoint fuel rate incurred was fixed at 2.5% instead of actual fuel incurred.

55. Beginning with June 2005 production, while SM continued selling the gas at the wellhead, SM Energy paid royalties for gas sold on the Coal County System based on 100% of the Reliant East first of the month index price less a \$0.105 Centerpoint third-party gathering fee and a fixed fuel percentage amount of 2.5%.⁵¹ In addition to the \$0.105 Centerpoint gathering fee and fixed Centerpoint fuel, a portion of the royalty owners, depending on their lease obligations, were charged a \$0.09 transportation fee ("TRO fee").⁵²
56. It is worth noting that not every royalty owner was charged the TRO fee and that SM Energy only deducted the TRO fee from an owner if it was determined that the lease allowed for such a deduction. The varying treatment of owners as it relates to the deductions creates the need for an individualized inquiry to determine not only if the fee was actually charged by the Defendant, but also to determine if such a charge was allowed by the obligations set forth in each, individual lease. I note that based on my review of the revenue accounting data provided to me in this matter, the Plaintiff itself, as well as all its predecessor interest holders (Pagosa and The Michael J. Weeks Revocable Trust), was never charged a TRO fee on

⁵⁰ SM003146.

⁵¹ Deposition of Thomas Ferguson, May 8, 2012, Exhibit 34.

⁵² Deposition of Thomas Ferguson, May 8, 2012, Exhibit 34; This fee increased from \$0.2165 (4/1/2006-11/30/2008) to at least \$0.2576 (12/1/2008-9/30/2010). It is worth noting that during this period, the Working Interest and Overriding Royalty Interest owners continued to only receive 85% of the index price, less deductions.

its Coal County interests.⁵³ However, numerous other owners in the same wells were, in fact, charged the TRO fee.⁵⁴

57. Beginning in April 2006, the index price for purposes of the price calculations changed from Reliant East to a fixed percentage between the FERC Centerpoint East f.o.m. index price and the Gas Daily average beginning in June 2006 while the adjustments for gathering, compression, and fuel remained the same.⁵⁵ This royalty valuation methodology held through June 2011 with a few notable exceptions: (1) the actual TRO fee charged to the subset of Royalty Interest owners who were actually charged the fee was adjusted to \$0.13/MMBtu in March 2007, \$0.18/MMBtu in April 2009, and \$0.17/MMBtu in October 2010; (2) the Centerpoint fuel fee changed to actual fuel incurred beginning April 2009; and (3) the Centerpoint gathering fee charged to Working Interest Owners and Overrides increased to \$0.57, and later \$0.51, in December 2008 and April 2009, respectively.⁵⁶ Additionally, the value of Condensate (drip) collected and sold was passed through to all owners from the effective date October 1, 2001 through September 2009.⁵⁷

Royalty Payment Methodology Commencing July 2011

58. The contractual pricing calculation between SM Energy and Four Winds changed significantly beginning in production month July 2011. The new calculation method no longer involved paying royalty owners based on a value that was based solely on a gas index price. Instead,

⁵³ See CONFIDENTIAL –SM.016263 – SM.016273.

⁵⁴ For example, the royalty owner Susan Garnett (Owner Number 47425) in the Duncan Shores 1-1 well was charged the TRO fee in all months while the Michael J. Weeks Revocable Trust owner (Owner Number 90330) was not for the same well in the same periods.

⁵⁵ For Royalty Interest owners, this value was 80% FERC Centerpoint East f.o.m., and 20% Gas Daily avg. For Working Interest Owners and Overrides, this value was 75% FERC Centerpoint East f.o.m. and 25% Gas Daily avg (4/1/2006-11/30/2008) and 80%/20% (12/1/2008-6/30/2011).

⁵⁶ Deposition of Thomas Ferguson, May 8, 2012, Exhibit 34.

⁵⁷ Deposition of Thomas Ferguson, May 8, 2012, Exhibit 34.

SM Energy began paying based on the proceeds that it realized from the sale of both residue gas and NGL products.⁵⁸

59. The price for Residue Sales is calculated by summing the sales from the Laclede, Gavilon, and Centerpoint delivery points plus any Centerpoint Cashout amount, less a \$0.105 system compression/gathering fee (the TRO fee⁵⁹).⁶⁰ However, beginning in July 2011, the royalty interest owners no longer incurred the Centerpoint gathering fee in the calculation of royalty. Additionally, similar to the period prior to July 2011, not all royalty owners were charged the TRO fee. SM Energy only deducted the TRO fee from an owner if it was determined by the Defendant that the lease allowed for such a deduction. I note that, like the preceding period prior to July 2011, based on my review of the revenue accounting data provided to me in this matter, the Plaintiff itself, as well as all its predecessor interest holders (Pagosa and The Michael J. Weeks Revocable Trust), was never charged a TRO fee on its Coal County interests.⁶¹ However, numerous other owners in the same wells were, in fact, charged the TRO fee.⁶²
60. The price calculation for NGL sales is the same for all owners and is calculated by summing the sales of each product from each of the delivery points (Centerpoint, Atlas Pod 1 Tupelo, Atlas Pod 2 Centralhoma, Atlas Mowdy Compressor, Atlas Pod 7, and Donovan Pod 7), subtracting out Processing and Gathering Fees (for Pods 1, 2, 7, and Mowdy), Centerpoint's

⁵⁸ Deposition of Thomas Ferguson, May 8, 2012, Exhibit 34; From July 2011 through October 2013, both Royalty Interest and Working Interest Owners incurred a double deduction for Centerpoint Fuel through an actual fuel deduction and because owners were paid on volumes fuel, i.e. net of fuel. The formula referenced above became effective November 2013.

⁵⁹ Deposition of Kris Terry, July 11, 2018, 43:13-16.

⁶⁰ Deposition of Thomas Ferguson, May 8, 2012, Exhibit 34; Until October 2013, Royalty Interest owners were additionally charged a "CPS Fuel" fee.

⁶¹ See CONFIDENTIAL –SM.016263 – SM.016273.

⁶² For example, the royalty owner Susan Garnett (Owner Number 47425) in the Duncan Shores 1-1 well was charged the TRO fee in all months while the Michael J. Weeks Revocable Trust owner (Owner Number 90330) was not for the same well in the same periods.

Fuel/Shrink & Processing fees, and Pod 7's Operating fees, and then adding back the cashout total.⁶³

VIII. PAYMENT AND REPORTING TO ROYALTY OWNERS

61. SM Energy issues royalty payments to each of its owners on a monthly basis.⁶⁴ A remittance advice is available to each owner with detailed payment information that is associated with the total amount submitted. The detailed information associated with the payment is based on the actual realized revenue and its components recorded to the property actually realized and received by the Lessee, and allocated to each of the individual owners.
62. The Plaintiff argues there is a common question related to whether SM Energy properly reported all necessary and required information on each royalty owner's remittances from sales of gas produced from the potential class wells.⁶⁵ The Oklahoma Production Revenue Standards Act requires the inclusion (with each payment) of the "owner's share of the total value of sales attributed to such payment prior to any deductions" [emphasis added].⁶⁶
63. The Plaintiff further contends there was an underpayment of each putative class member's owner's share. Determining whether the amounts on the remittances actually reflect the owner's share (or the amount to which the royalty owner contends he is entitled) involves and requires consideration of all the numerous individualized issues that are discussed above. The appropriateness of the remittances cannot be determined for all potential class members and does not result in a common question.
64. Determining if the amounts reflected on the remittances is actually a representation of the "owner's share" requires consideration of the numerous individualized issues discussed

⁶³ Deposition of Thomas Ferguson, May 8, 2012, Exhibit 34.

⁶⁴ Certain owners may not be paid monthly due to ordinary course of business reasons, such as minimum payment or legal suspense, as well as the potential for lease terms requiring an alternative periodicity.

⁶⁵ Third Amended Complaint, dated February 21, 2017.

⁶⁶ 52 Okl.St. Ann. §570.12.

above. The appropriateness of the remittances cannot be determined across all potential class members.

IX. ADDITIONAL CLASS CERTIFICATION CONSIDERATIONS REGARDING NON-COAL COUNTY WELLS AND PRODUCTION

65. As noted previously, the class definition contained in Plaintiff's expert reports limits the potential class to wells connected to the Coal County Gathering System while Plaintiff's most recent complaint is state-wide. Until this point, I have only addressed facts and circumstances surrounding wells connected to the Coal County Gathering System. Due to the unknown nature of how this class will proceed, I have been instructed to comment on additional facts and circumstances regarding gas production from SM Energy wells not connected to the Coal County Gathering System.
66. The number of class members would increase to more than 10,000 if the class were to include all of SM Energy's Oklahoma wells.⁶⁷ The number of class wells would increase to approximately 540 wells and the geographic spread of wells would encompass counties as far northwest as Cimarron County and as far southeast as Latimer County.⁶⁸
67. The gas produced from SM Energy's wells throughout the state of Oklahoma was marketed under various third party and affiliate contracts.⁶⁹ Defendant is and was an active seller in the Oklahoma wellhead market.
68. In some circumstances, SM Energy sold the gas in outright sales to purchasers, both affiliated and third party, at or near the wellhead.⁷⁰ In other circumstances, SM Energy (or its affiliate)

⁶⁷ SM.016263 – SM.016273.

⁶⁸ SM.338000A.

⁶⁹ See, for example SM-005255-SM-005256, gas sold on the Enogex system was subject to an affiliate contract between SM Energy and Four Winds while SM separately sold gas on the Enbridge system through an arm's length contract. See SM_00005247.

⁷⁰ See, for example, the Base Contract for Short-Term Sale and Purchase of Natural Gas, dated 10/27/2001, between Four Winds Marketing, LLC and St. Mary Land & Exploration Company – SM002247.

sold the gas to purchasers downstream of the wellhead, such as a central delivery point, after the gas was commingled with gas from other wells.⁷¹ Various post-production steps such as gathering, treating, dehydration, and compression sometimes occurred prior to such delivery points. The buyer under SM Energy's wellhead sales contracts may or may not have processed the purchased gas, and SM Energy, having relinquished title and custody of the gas, may not have information concerning the buyer's downstream activities.

69. Under other circumstances, SM Energy contracted with a service provider to transport the gas from the well to a point downstream where it was sold at or near an interconnect with a downstream pipeline.⁷² Finally, in some circumstances SM Energy contracted with a service provider to transport the gas downstream and process the gas in a plant to extract natural gas liquids. The residue gas was sold at or near the tailgate of the plant and the liquids were sold separately, generally to the plant operated or transported, and sold further downstream.⁷³
70. The pricing terms under the various marketing arrangements reflects the value of the gas at the point or location that the title transferred and by which Defendant was paid for that sale.⁷⁴ Such prices were based on published indexes or the purchaser's resale price (or prices). Furthermore, in some cases, the price paid to the Defendant included a component that reflected value attributable to natural gas liquids. That price also sometimes included

⁷¹ See, for example, the Natural Gas Purchase Contract and Confirmation, dated May 1, 2003, between Superior Pipeline Company, L.L.C. and St. Mary Land & Exploration Company – SM003431.

⁷² See, for example, the Gas Dedication Agreement between El Paso Services Company and St. Mary Operating Company, et al., dated August 1, 1997 – SM001053.

⁷³ See, for example, the Gas Gathering and Processing Agreement, dated June 1, 2011, between SM Energy Company and Markwest Oklahoma Gas Company, L.L.C. – SM005076.

⁷⁴ These sales occurred exclusively at the wellhead. It is worth noting that the term "wellhead sales" in the natural gas industry vernacular includes sales made at meters into the first-connected pipelines, which are typically located close to the actual wellhead.

adjustments that utilized either a percentage or a fixed per unit amount. SM Energy had more than thirty contracts with various different pricing terms with numerous purchasers.

71. The complexity of the various marketing arrangements is exhibited in the commercial terms of the gas marketing contracts. The exact circumstances enveloping the negotiations and execution of each of the gas marketing contracts, as well as each of the related amendments, are largely unique to that contract at the time the contract or amendments were entered into. The marketing arrangement for any particular well in any given month will have a direct impact on the way royalty was calculated and paid to the members of the class.
72. As noted above, gas composition observed in SM Energy's wells state-wide is even more diverse as shown below:⁷⁵
 - a) Btu factor range: 0.951 – 1.75; and,
 - b) GPM range: 0.14 – 13.56.
73. The above ranges are substantial in their diversity, and the various gas compositions can have a direct impact on the potential proceeds and market value of the gas at the wells. This is best illustrated by way of example. The Avriett #1-35 well and the Weter 2-35 well are both sold to Enogex under the same base contract number.⁷⁶ In February 2008, the Avriett #1-35 well had an effective wellhead price of \$4.02/MMBtu⁷⁷ and the Weter 2-35 had an effective wellhead price of \$5.39/MMBtu,⁷⁸ even though both wells were sold outright to Enogex under the same contract and terms.
74. The Avriett #1-35 well had a total GPM of 4.3154⁷⁹ and the Weter 2-35 well had a total GPM of 6.3905.⁸⁰ This illustrates the fact that the value of the gas and, by extension, the royalty

⁷⁵ See Expert Report of Kyle Pearson, dated December 4, 2018.

⁷⁶ CONFIDENTIAL--SM.026935 - 02 2008 ENOGEX OGE POP.pdf, page 8 and 87.

⁷⁷ CONFIDENTIAL--SM.026935 - 02 2008 ENOGEX OGE POP.pdf, page 8.

⁷⁸ CONFIDENTIAL--SM.026935 - 02 2008 ENOGEX OGE POP.pdf, page 87.

⁷⁹ CONFIDENTIAL--SM.026935 - 02 2008 ENOGEX OGE POP.pdf, page 8.

⁸⁰ CONFIDENTIAL--SM.026935 - 02 2008 ENOGEX OGE POP.pdf, page 87.

payments made for that gas production, must be analyzed in such a way that incorporates not only the general commercial terms of comparable sales, but also the manner in which those terms can impact the actual outcome of the value received at an individual well and owner level.

75. This substantially wider range of lease obligations, marketing arrangements, and gas quality diversity is also reflected in the additional actual royalty payment methodologies. The class as defined in the Third Amended Petition includes hundreds of wells outside of Coal County in which, as discussed above, there is substantial variance regarding what is actually sold, who it is sold to, how it is sold, and the methodology for remitting. There are a myriad of royalty payment obligations and actual royalty payment methodologies in these various production areas that are currently included in the class as defined by the Plaintiff.

X. CLASSWIDE DAMAGES MODEL

76. It is impossible to measure damages on a class-wide basis in this matter. Each of the aforementioned inquiries regarding issues such as marketing contracts and pricing formulas, costs incurred upstream of where the gas is first marketable (according to the Plaintiff) versus costs incurred downstream of where the gas is first marketable, as well as gas used versus gas sold, and the demonstrable diversity of the lease language for each of the owners will not reduce to a singular, common class-wide model.
77. The pay revenue history would contain the sum of money actually paid; however, this is only a singular variable in the myriad of data components required in order to actually calculate damages (if any exist) under the Plaintiff's various theories of liability for each owner in each well in each month.

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78. This matter will require an individualized inquiry both at the well level, as well as at the individual lease level within each well, if one were to calculate any potential damages associated with the allegations made by the Plaintiff using a proper methodology.
79. Even if one assumes there were common questions in this matter, those questions would not predominate. The foundational basis of the claims made by the Plaintiff is that the Defendant underpaid royalties to every royalty owner included in the putative class. The inquiries necessary to determine if any particular royalty owner potentially included in the class has been underpaid are predominately individualized inquiries.

XI. CONCLUSIONS REGARDING ROYALTY UNDERPAYMENT ISSUE

80. Determining whether a royalty underpayment exists for any particular royalty owner requires an individualized inquiry into the facts and circumstances of that particular owner, including but not limited to, the way the gas from the well in question was sold, the related price component information available to the accountant recording the sale, and the existing royalty standard in the particular lease or other applicable land contract instrument. Furthermore, for owners whose royalty standard contains a "market value at the well" provision, the determination of the market value of the production from a particular well will actually require a full market value analysis of that production for each month. Such a market value determination, and the derivative evaluation of whether the royalty was actually underpaid to a particular owner in that well, cannot necessarily resolve issues regarding the market value of other production from other wells or whether there were royalty underpayments to owners in those other wells.
81. As discussed in the above sections, it is evident that each layer of inquiry regarding Defendant's leases, well and production profiles, marketing arrangements, and revenue accounting creates a dimension of diversity, uncommon questions, and uncommon

resolutions. Each unique dimension adds yet another stratum of individualized inquiry that only grows more complex as the next dimension is added. These complexities are evident in the various wells discussed herein and would be markedly more involved in a trial of all wells at issue.

82. The Plaintiff claims that Chieftain Royalty Company's situation is not any different than the condition of Defendant's other royalty owners in Oklahoma and that the damages allegedly suffered can be determined on a Class-wide basis based on the facts relating to Chieftain.⁸¹ The Plaintiff makes this argument despite the ample aforementioned evidence to the contrary. For example, as discussed above, Chieftain Royalty Company and its predecessor interest owners were never subject to TRO deductions for gathering and compression while other putative class members were. Thus, the Plaintiff would not have such a claim that could be made on behalf of the class as a whole.
83. It is obvious that answers to the investigation into the Plaintiff's treatment in the Duncan Shores 1-1 well and the proposed class representative will not answer the relevant liability questions for other owners in other wells.

XII. STANDARD OF MARKETABLE CONDITION

84. Based on the opinions proffered by Plaintiff's expert, Ms. Hoge, for all the potential class members (as well as under the leases of some of the potential class members), a determination of the royalty obligation requires an analysis of the marketable condition of the production sold as well as the actual costs necessary to place the gas in marketable condition. It is impossible for these questions regarding marketable condition to be central to the legitimacy of each proposed class members' claims for a number of reasons.

⁸¹ Third Amended Complaint, dated February 21, 2017.

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85. For numerous leases included in this potential class, the marketable condition issue is not a relevant question considering the specific language of the lease. Particular leases that include express language that establishes the specific royalty valuation location to be “at the well,” or that require payment of royalties on “raw gas,” will abrogate the necessity of even considering the marketable condition question posed by the Plaintiff for production related to that particular royalty owner. Still, other leases overtly address issues of costs incurred that are deductible or not deductible, with no consideration of whether those costs are actually necessary to put the gas in marketable condition.
86. Plaintiff and Plaintiff’s experts claim that no gas is in a marketable condition until it is delivered into downstream interstate pipelines.⁸² Regarding this marketable condition claim, the Plaintiff contends that any costs incurred and borne by SM Energy’s purchasers downstream of the point of sale at the well cannot be deductible.⁸³ In other words, the Plaintiff essentially argues that SM Energy must supplement its actual proceeds for costs or adjustments included in the price formula and incurred by another party that the Plaintiff unilaterally judges to be disallowed deductions.
87. Assuming one even accepted, *arguendo*, that all the gas produced from the potential class wells is not actually in marketable condition until delivery into the interstate pipeline, one simply cannot assume that none of the costs (including processing costs) incurred by the purchasers of Defendant’s gas are deductible. It is entirely possible that gas sold at the wellhead could be conditioned to meet various interstate pipeline specifications throughout Oklahoma without the necessity of incurring substantial portions of the assorted costs

⁸² Expert Report of Daniel Reineke, dated October 5, 2018, pages 21-22. Mr. Reineke also claims that SM’s gas was not a marketable product at the well (p. 21), that “marketable” or “merchantable” gas equates to “pipeline quality gas,” (4-5), and that it is the presence of an index that establishes a marketplace (13).

⁸³ Expert Report of Daniel Reineke, dated October 5, 2018, page 27.

incurred by additional parties that apply various activities to the gas (including extraction of NGLs) in order to enhance the value of the gas.

88. Activities such as compression, and their related costs, within a processing plant, like the National Helium plant, that may be necessary to take inlet gas and prepare it to meet a downstream pipeline's inlet specifications are likely very different, and substantially less costly, than potential processing activities performed in a plant for purposes of extracting NGLs from the delivered gas. Additionally, there is substantial diversity amongst SM Energy's wells with regards to the distance that production from a well might travel to reach a downstream market.
89. In reaching his conclusions regarding the marketability of SM Energy's production (as well as all other wellhead production in Oklahoma), Plaintiff's expert Mr. Reineke ignores the fact that the gas in this matter, as well as outside this matter, has been sold at or near the well in arm's length transactions in the ordinary course of business. The Plaintiff's single market concept rests on a tenet that contradicts the clear business and economic reality present not only in the State of Oklahoma, but for the comprehensive set of wells at issue in which gas production is sold by SM Energy at the well every day. One would also have to ignore that SM Energy's interests under these arrangements are wholly aligned with the royalty owners' interests as SM Energy has everything to gain and nothing to lose by achieving the best price possible.
90. As exists with most every commodity, the natural gas market is essentially an interlinked and successive chain of commerce, which begins with a produced raw product that is transported, refined, or altered in some manner as that product progresses through the value chain towards the end consumer. The natural gas chain of commerce includes a number of distinct market places along that chain, beginning with the wellhead, and the existence of one market

(such as residue pipelines) does not preclude the existence of other concurrent markets such as the wellhead market upstream or citygate markets downstream. Further, the prices along that chain are often reflective of the relative position in the value chain. There are a number of markets along this chain of commerce including wellhead markets, unprocessed and processed pools, pipeline markets, citygate markets, industrial markets, and retail markets.

91. The economic irrationality of the Plaintiff's position regarding its marketable condition standards can be further illustrated by employing the approach to alternative, well-established commodity markets such as crude oil. Applying the Plaintiff's theory to crude oil markets as an example, one would ultimately reach the unreasonable conclusion that there is no crude oil market at or near the well. By extension, one would also conclude from Mr. Reineke that crude oil cannot be in marketable condition until after it has been transported and refined in a refinery and transformed into end-use products such as unleaded gasoline and diesel fuel.
92. There are numerous other commodities in which the Plaintiff's attempts to disregard entire aspects of the chain of commerce can be demonstrated as irrational, such as the cattle market or rare earth metals. The cattle market value chain is yet another demonstration that the Plaintiff's claims are specious and flawed. Numerous markets exist between the beef cattle rancher through end-user beef consumption, such as local cattle auctions (that are somewhat parallel to the wellhead market in which there is a variety of quality), feed lots, mass slaughterhouses, and ultimately, retail restaurant or grocery distribution.
93. Furthermore, much like the NGLs in the gas stream, there are a number of derivative products in the cattle market that monetize constituent parts of the cattle including hooves, hair, skin, bones and blood – all of which are subject to their own concurrent markets for use in various derivative consumer products. Similarly, while rare earth metals or other mining commodities

like iron ore are not end-use products, they are sold every day at market values in high volumes to be further refined and as inputs into other products such as cellular phones or steel products.

94. It is also fairly simple to demonstrate the fallacious nature of the Plaintiff's claim that the gas produced in Oklahoma (including SM Energy's production) is not in marketable condition until that gas is delivered into interstate pipelines when one considers that unprocessed gas from wells in Oklahoma, including potential Class Wells in this matter, is used, consumed, and/or sold prior to being processed or treated for delivery to interstate transmission pipelines. As an example, there are substantial quantities of unprocessed gas in some areas of Oklahoma that are often used in compressors and pumping units for water flood units, as well as commonly sold in the field under contracts for agricultural irrigation use.
95. The apportionment of the total costs actually incurred would also be a potentially necessary step, even if one assumes that some portion of the total costs necessary to meet the quality specifications of some downstream gas pipelines were not deductible. These allegedly impermissible costs would not necessarily include all of the costs of processing that were incurred by a purchaser in this case. It would be necessary to investigate what portion of the processing fees were associated with meeting the various potential pipeline specifications. Further, it would be critical for one to ascertain what portion of the processing fees paid by SM Energy's various purchasers would have been associated with extracting natural gas liquids, an exercise that would lead to the necessity of a month-by-month, well-by-well, system-by-system, and plant-by-plant analysis.
96. Moreover, if one were to accept the terms of the Plaintiff's marketable product premise in this case, it would inherently implicate the question of whether costs that were borne by the purchaser and included in the calculation of the value of the gas were actually reasonable

and whether or not they enhanced the value of the gas relative to the costs. Determining what proportion of the costs paid by the purchaser were reasonable and actually enhanced the value of the gas would also require a month-by-month, well-by-well, system-by-system, and plant-by-plant analysis. It would be axiomatic when considering the theories proffered by the Plaintiff that the duty to market (assuming the existence of such a duty) could not have been breached as to a particular owner unless that owner was charged for costs prior to the point that the gas was in marketable condition.

97. It appears to be the Plaintiff and Mr. Reineke's position that not just the gas in question in this matter, but all gas in Oklahoma, is never in a marketable condition at or near the well and must be processed and ready to enter the interstate pipeline before it can reach their threshold. Putting aside that the question of whether gas is in marketable condition "at the well" is not a relevant question for all proposed class members in this matter, the notion that no gas is ever actually in marketable condition at or near the well is unsupportable on several levels and is simply not true.
98. The point at which gas produced from one of SM Energy's wells was first in marketable condition can be materially influenced by the commercial market for the purchase of unprocessed gas on the lease in the area and at the time. Gas produced from any particular potential class well would certainly be in marketable condition at the sales point at or near the wellhead if there was a market for the purchase of the gas on the lease in the area of the well from competing purchasers such as those with which SM Energy has numerous arm's length contracts. This provides evidence of a competitive market for the sale of SM Energy's gas at the well over the relevant period.
99. Until the mid-1980s, virtually the only location gas could actually be sold by a producer was on the lease, in a wellhead sale under regulated pricing. Following the deregulation of the

natural gas market, substantial quantities of gas have continued to be sold in wellhead sales in the Midcontinent producing regions, including tens of thousands of third-party, arm's-length transactions at the well, much like the ones entered into by SM Energy in these wells.

100. Additionally, the US Energy Information Administration has published wellhead price information for natural gas since 1922 as well as state-level wellhead price data since 1967. The related statistics reflect the wellhead market prices for natural gas in Oklahoma, as well as other states.⁸⁴ It is clear that there has been an active wellhead market for the sale of gas across the State of Oklahoma, including the wells at issue in this matter.

101. The economic reality of the existence of the wellhead market was expressly acknowledged by the Tenth Circuit Court of Appeals in 2013 in their Order and Judgment related to the *Chieftain Royalty Company v. XTO Energy, Inc.* matter. In that decision, the Court stated that “[f]urther, we remind the district court that, under Oklahoma law, there is a possibility that some gas could be in marketable condition at the well” [emphasis added].⁸⁵ This would certainly undermine, if not expressly contradict both Dr. Foster and Mr. Reineke’s contention that it is not possible for gas to ever be marketable at the well in Oklahoma.

102. Mr. Reineke’s opinions regarding the alleged lack of marketability of SM Energy’s gas production (if not the entire wellhead market where it may exist in the state of Oklahoma) as set forth in his report is predicated on his presumption that the appropriate standard for marketable condition is his restrictive definition of a single, static market location. As

⁸⁴ Energy Information Administration: http://tonto.eia.doe.gov/dnav/ng/ng_pri_sum_dcu_nus_a.htm. The EIA’s Wellhead Price data is only reported by state through 2010.

⁸⁵ See *Order and Judgment, Chieftain Royalty Company v. XTO Energy, Inc.*, in the United States Court of Appeals, Tenth Circuit. No. 12-7047. It is also worth noting that in that same decision, the Tenth Circuit Court of Appeals stated that the “district court should consider whether identifying the point at which a particular stream of gas *becomes marketable* will require an individualized inquiry and, if so, whether that inquiry will overwhelm questions common to the class.” It is my opinion that from an economic perspective, in order to determine if any particular stream of gas is marketable, it would require an individualized inquiry into the economic realities (including gas quality/condition, contracts, and other factors discussed below) to make such a determination.

discussed above, the Tenth Circuit Court of Appeals noted the economic reality that it is possible for gas to be marketable at the well.

103. In *L. Ruth Fawcett v. Oil Producers, Inc. of Kansas*,⁸⁶ the Kansas Supreme Court stated:

*"Fawcett argues the 'marketable condition rule,' which is an offshoot of the implied duty to market, imposes on operators the obligation to make gas marketable at the operators' own expense. 49 Kan. App. 2d at 197. Fawcett claims raw natural gas sold at the well is not marketable as a matter of law or fact until it is processed and enters an interstate pipeline, so its royalties cannot be reduced by the processing costs that are set out as deductions in the purchase agreements. We disagree with Fawcett's equating 'marketable condition' with interstate pipeline quality."*⁸⁷

104. The Kansas Supreme Court went on to state:

*"What it means to be 'marketable' remains an open question. But the answer is not simply, as Fawcett would have us hold, interstate pipeline quality standards or downstream index prices."*⁸⁸

105. Furthermore, when considered from a temporal perspective, the Plaintiff's presumptions also result in a nonsensical requirement that the parties that entered into the lease at the time of its execution intended to contractually agree to various standards of royalty payment, including exemplars from the SM Energy leases such as "market value" or "proceeds" or some other value "at the well," that could not possibly be met. Instead, the respective royalty payment provisions in these leases insinuates expectations by both parties that the gas was capable of being sold at or near the well. It also suggests that if the gas was not sold at the well under these leases, a corresponding value at the well *could* be determined. However, if

⁸⁶ *L. Ruth Fawcett, Appellee, v. Oil Producers, Inc. of Kansas, Appellant*, In the Supreme Court of the State of Kansas, No. 108,666.

⁸⁷ *Ibid.*

⁸⁸ *Ibid.*

one were to accept the position of the Plaintiff, there would be absolutely no sale, irrespective of the physical nature or condition of the gas, that could satisfy the Plaintiff's criteria for marketable condition prior to arriving at various distant markets at the respective tailgates of processing plants.

106. An individualized market value study into the respective markets for gas sold at the wellhead in each county for each month over the period at issue in this matter would be required to evaluate the Plaintiff's claims in this matter. The exploration into the facts and circumstances of the unprocessed gas market in Coal County where the Avanzini 3-1H well was drilled in 2011 will not provide answers into the market for unprocessed, wellhead gas across the entire State of Oklahoma, in Coal County for any other month, or any other county in any other month across the relevant time period.
107. Ultimately the unique circumstances of each well's particular gas production should be considered in order to evaluate whether each meets the marketable condition threshold (even as posed by the Plaintiff) on a well-by-well, system-by-system, and month-by-month basis.

XIII. COMMENTS REGARDING THE EXPERT REPORT OF DANIEL T. REINEKE, P.E.

108. Mr. Reineke's October 5, 2018 report encompasses three main topics. The first is his opinion that a "typical" lease requires the lessee to "bear all costs and expenses necessary to....market the products from the lessor's mineral estate, including putting the gas in marketable condition."⁸⁹ The second is his opinion that gas produced from the wells at issue in this matter, and rather all wellhead gas, is not a marketable product at the well.⁹⁰ Lastly,

⁸⁹ Expert Report of Daniel Reineke, dated October 5, 2018, page 4.

⁹⁰ Expert Report of Daniel Reineke, dated October 5, 2018, pages 6 and 13 – 15.

Mr. Reineke outlines SM Energy's royalty and marketing practices for wells connected to the Coal County gathering system.

109. As I will further discuss below, there is no typical lease because there is substantial diversity in the royalty payment clauses of the leases in this matter. Plaintiff's expert Alyce Hoge proffers in her report that there are four different types of leases and within each of those four groups are additional groups of leases with different royalty payment obligations.⁹¹ It is my understanding from Defendant's expert Kris Terry that the amount of lease obligation diversity is substantially greater than what was offered by Ms. Hoge.

110. Mr. Reineke opines that raw gas is not in marketable condition until it has reached "pipeline quality" or the quality specified by interstate pipelines.⁹² He supports his conclusion with a collection of public statements and websites that describe possible processing treatments for gas.⁹³ However, these statements are only relevant to the interstate pipeline market (i.e., the transformation into a refined product). Mr. Reineke's opinion that they support the definition of "marketable condition" is predicated on the arbitrary and unsupported economic claim that the interstate pipeline provides the demarcation between marketable and non-marketable gas. I am aware of no economic or legal authority that supports Mr. Reineke's, a petroleum engineer, *ipse dixit* conclusion requiring gas be at the interstate pipeline to be in marketable condition.

111. Mr. Reineke also contends, without citing to any legal authority, that the "courts have agreed that gathering, compressing, treating, dehydrating and processing are necessary to put most produced raw gas into marketable (merchantable) condition." However, the Court in the *Tony R. Whisenant v Strat Land Exploration Co.* matter, in which Mr. Reineke was an expert,

⁹¹ Expert Report of Alyce Hoge, dated October 5, 2018, pages 6 – 7 and Plaintiff's Exhibits 28. I understand that expert SM Energy's expert Kris Terry was tasked with responding to the report of Alyce Hoge.

⁹² Expert Report of Daniel Reineke, dated October 5, 2018, pages 6 – 15.

⁹³ Expert Report of Daniel Reineke, dated October 5, 2018, pages 15 – 18 and Plaintiff's Exhibits 5 – 23.

stated that “The Court did not further define the meaning of “marketable product,” nor has it done since.”⁹⁴ Mr. Reineke’s assertion above is simply false given that the courts have not defined marketable condition.

112. There are multiple cases in Oklahoma that explicitly defer to the prevailing prices in the field for guidance in determining the appropriateness of royalty payments. As an example, one of the key factors that *Howell* states should be considered in evaluating royalty payments are the actual prices observed for wellhead sales in arm’s-length transactions in the area, such as the transactions between SM Energy and its purchasers.⁹⁵ The actual prevailing market price for a single well will most likely not provide any guidance as to the prevailing market price for another well due to a number of factors (e.g., varying gas composition, midstream, and numerous other factors) that can affect the market value.
113. The need for individualized inquiries pertinent to the existence of a duty to market, and whether that duty was breached as to any specific royalty owner in any specific well, certainly demonstrates that the resolution of that question will not resolve an issue that is foundational to the validity of each of the claims for all class members in one stroke. Based on the diversity at hand, the question of whether the duty to market as it relates to any particular owner in any particular well was breached is not a “common” question.
114. Mr. Reineke also makes several false claims about the relationship between SM Energy and its affiliate Four Winds. Mr. Reineke stated that “often inter-company contracts did not even exist for the supposed “wellhead” purchase of gas by Four Winds from SM [Energy].”⁹⁶

⁹⁴ Tony R. Whisenant, Appellee, vs. Strat Land Exploration Co, Appellant, In the Court of Civil Appeals of the State of Oklahoma, No. 115,660. I also note that in the matter of Billy J. Strack, et al., Appellees, vs. Continental Resources Inc., Appellant, In the Court of Civil Appeals of the State of Oklahoma, No. 114,102, the Appellate Court also held that “The question of where and when particular gas is marketable is not settled in Oklahoma. In addition, there is no categorical rule with respect to when post-production costs may be considered for royalty valuation.”

⁹⁵ *Howell v. Texaco, Inc.*, 2004 OK 92, 112 P. 3d 1154.

⁹⁶ Expert Report of Daniel Reineke, dated October 5, 2018, pages 18.

However, SM Energy produced wellhead contracts and amendments related to all of the wells at issue in this matter.⁹⁷

115. Mr. Reineke claims SM Energy failed to pay royalties on NGLs and drip condensate.⁹⁸ By virtue of SM Energy paying royalties on 100% of the MMBtus produced and sold, this claim is undermined by SM Energy's actual practices. However, in making this claim, Mr. Reineke inadvertently underscores additional issues that make an individualized inquiry necessary. As was discussed earlier in this report, there is substantial diversity of gas composition across SM Energy's wells and because of the diversity, not every well will generate material amounts of NGLs or drip condensate. It is therefore necessary to review not only the varying obligations in the leases and marketing arrangements for each of the wells but also the gas composition and quality to address whether or not an NGL or drip condensate claim even applies.

116. Finally, Mr. Reineke opines that SM Energy's royalty payment methodology is the same for all royalty owners and damages can be calculated on a class-wide basis.⁹⁹ However, as has been discussed in detail throughout this report, there are many factual determinations that must be made at a well, month, owner, and lease basis, and variation exists on those very same points. As a result, it is impossible that a class wide damages model will result in a class-wide resolution "in one stroke."

XIV. COMMENTS REGARDING THE EXPERT REPORT OF BARBARA A. LEY

117. Barbara Ley also filed a report on behalf of the Plaintiff on October 5, 2018. Her report largely deals with merit issues in this matter including several comments on how SM Energy paid

⁹⁷ See SM003146-003156, SM005070, SM003143, SM003136-003142, SM003135, and SM003134.

⁹⁸ Expert Report of Daniel Reineke, dated October 5, 2018, pages 25 – 27.

⁹⁹ Expert Report of Daniel Reineke, dated October 5, 2018, pages 36 – 40.

royalties to the putative class members at issue in this matter. Most, if not all, of Ms. Ley's opinions regarding SM Energy's royalty payment practice are predicated on unsupported and uncited statements about how SM Energy *should* pay royalty – largely from the *ipse dixit* statements and conclusions offered by Plaintiff's expert Daniel Reineke's report. Ms. Ley's report states:¹⁰⁰

"I primarily rely on Mr. Reineke's expertise in determining when the gas becomes a marketable product and the reasonableness of the fees charged."

118. Obviously, to the extent that it is determined that Mr. Reineke's conclusions are unreliable, it would render Ms. Ley's report moot.

119. I note that while the majority of Ms. Ley's report appears to be related to merits issues, she also addresses the question of class certification by simply stating that "[b]ecause SM withheld royalties from all Class Members in the same way, the type of proof and calculation of damages that will be necessary can be performed uniformly on a class-wide basis."¹⁰¹ As has been discussed in greater detail above, this is simply not true. The proposed class representative categorically did not ever have the same type of deductions as all other members of the class. However, I further note that Ms. Ley's erroneous conclusions regarding her ability to perform class-wide damages based on the presumption that all class members were paid identically only addresses one aspect of the equation necessary. She has performed no analysis into how her class wide damages would integrate an evaluation of the underlying obligations required by each individual lease.

120. As discussed above, these individual leases and the diversity of obligations were key considerations for the Oklahoma State Court of Appeals in their decision to deny class

¹⁰⁰ Expert Report of Barbara Ley, dated October 5, 2018, page 22.

¹⁰¹ Expert Report of Barbara Ley, dated October 5, 2018, page 15.

certification in the *Strack v. Continental* and *Whisenant v. Strat Land* and matters.¹⁰² As stated above, the Court stated: “[e]ach of the types of royalty provisions will require a different inquiry to determine a Class Members’ claim for underpayment of oil or gas royalties. The determination of what was actually required to be paid versus what Continental ultimately paid will be different for each Class Member depending on particular lease language.”

121. I observe that in her report, Ms. Ley does not provide any proposed methodology for purposes of quantifying the alleged class-wide damages in this matter. Inherently, as an economist, part of my role in proffering an opinion related to whether this class should be certified would be dependent on the methodology proposed by the Plaintiff in order to calculate class-wide damages for each of the potential members of the class. In my opinion, without a viable methodology of this type that is put forward by the Plaintiff, certification of this proposed class would not be proper.

122. As stated, the majority of Ms. Ley’s report deals with merits issues and contains a number of unsupported statements or assumptions that are misleading. For example, in discussing the nature of how SM Energy is paid for gas production, Ms. Ley characterizes the percentage of proceeds retained by Four Winds and deducted from the payment of royalties as a “profit.”¹⁰³ I disagree with this oversimplified characterization. Four Winds does actually incur substantial costs to gather gas from the Coal County wells before the gas is transported on CenterPoint. There are significant associated costs incurred, both in capital expenditures and ongoing operating and maintenance costs, to run these off-lease facilities that Four Winds, in fact, bears. Ms. Ley’s characterization that the compensation for providing these services

¹⁰² Billy J. Strack, et al., Appellees, vs. Continental Resources, Inc., Appellant, In the Court of Civil Appeals of the State of Oklahoma, No. 114,102 and Tony R. Whisenant, Appellee, vs. Strat Land Exploration Co, Appellant, In the Court of Civil Appeals of the State of Oklahoma, No. 115,660.

¹⁰³ Expert Report of Barbara Ley, dated October 5, 2018, page 4.

and incurring these costs is simply a “profit” is misleading and false. This is merely an example of the type of misleading statements present in Ms. Ley’s report.

XV. CONCLUSION

123. Due to the necessity of numerous individualized inquiries by lease, month, well, system, marketing arrangement, and purchaser into the circumstances connected to each well and owner within the putative class, as well as the need to analyze each of the individual leases and/or contracts of every proposed class member (including any changes over time), it is my opinion that there are no common questions across the proposed class. It is also my opinion that individualized inquiries will predominate in resolving the claims of the putative class members.

124. My work in this matter is ongoing and if additional relevant information is provided to me or becomes otherwise available, I may supplement this report.

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EDUCATION

Masters in Business Administration, University of Texas at Austin, 2012

Bachelor of Arts in Economics, University of Texas at Austin, 2002

WORK EXPERIENCE

Applied Economics Consulting Group, Inc., 2008 to Present

Director

Financial consulting, litigation support and testimony as an expert in a variety of energy and other economic related matters. Data analysis through model construction, programming, and statistical analysis. Assist clients in support of valuation and financial damages analysis.

Applied Economics Consulting Group, Inc., 2003 to 2008

Consultant

Financial consulting, litigation support to testifying experts in a variety of energy related matters.

George & Donaldson, LLP, 1998 to 2002

Litigation Assistant

Deja News, Inc., 1996 to 1997

Assistant Principal Systems Architect for Statistical Testing

CIVIC AFFAIRS AND MEMBERSHIPS

American Economics Association

National Economics Association

World Economics Association

Leadership Austin

Eric R. Krause
List of Testimony 2008-2018
(client underlined)

1. Fridkin-Kaufman, Ltd., Plaintiff v. Gastar Exploration Texas L.P. fka First Source Gas L.P., et al, Defendant (In the 281st Judicial District Court of Harris County, Texas, Case No. 2008-74765) [Report]
2. Trust Venture Company, L.L.C. on Behalf of the Torch Energy Royalty Trust, Plaintiff v. Constellation Energy Partners, L.L.C., Defendant (In the Circuit Court of Tuscaloosa County, Alabama, Civil Action No. CV-2008-900751) [Hearing Testimony]
3. Hat Creek Energy, L.L.C., Plaintiff v. Gasco Production Company, Defendant (In the District Court, City and County of Denver, Colorado, Case No. 2012-CV-2055) [Report & Supplemental Report]
4. Fort Apache Energy, Inc. and Drilling Risk Management, Inc., Plaintiffs v. Gemini Insurance Company, Berkeley Oil & Gas Specialty Services, LLC, OCB Interests, L.L.C. f/k/a BC Johnson Associates a Unit of the Specialized Loss Adjusting Division of York Risk Services Ground, Inc., and J.H. Blades & Co., Inc., Defendants (In the 216th District Court of Kendall County, Texas, Case No. 12-066) [Designation]
5. Choice Exploration Inc.; LLOG Exploration Company, LLC; LLOG Exploration Texas, LP; Seidler Oil & Gas, LP; Overlord Energy Investments, LLC; Henderson Group, Inc.; Russo Exploration, LLC; Oil2 Eisenhower Prospect, LP; & Big "6" Drilling Company, Plaintiffs v. Weatherford U.S., LP; Weatherford International, Inc.; Weatherford Artificial Lift Systems, Inc.; Freudenberg Oil & Gas, LLC; MWW-MDV Operations, LP; MWW-MDV Properties, LP; MWW-GP, LLC; MDV-GP, LLC; Michael W. Ward; Michael D. Viator; Cameron International Corporation; Cameron, Inc.; & Cameron Solutions, Inc., Defendants (In the 269th District Court of Harris County, Texas, Cause No. 2013-18463) [Report, Supplemental Report & Deposition]
6. Bigie Lee Rhea, Plaintiff v. Apache Corporation, Defendant (In the United States District Court for the Eastern District of Oklahoma, State Case No. CJ-2014-170) [Affidavits, Report & Deposition]
7. In the Matter of the Marriage of K.S.L. and R.R.L. (In the 408th District Court of Bexar County, Texas, Case No. 2013-CI-05201) [Affidavit]
8. Energy Services Group, Inc., Plaintiff v. Quality Carriers, Inc. and Reagent Chemical & Research, Inc., Defendants (In the United States District Court for the Northern District of Texas, Fort Worth Division, Civil Action No. 4:14-cv-449-A) [Report & Supplemental Report]
9. Kevin L. Jeter, Joe A. Jeter, Barbara Lucas, James H. Miller, Sharon Rigsby Miller, Larry Smith, and Janice Sue Parker, Individually and as a Class Representatives on Behalf of All Similarly-Situated Persons, Plaintiffs v. Wild West Gas, LLC; Wild West Gas, Inc.; Bullseye Energy, Inc.; Fountainhead, LLC; and KRS&K, an Oklahoma General Partnership, Defendants (In the United States District Court for the Northern District of Oklahoma, Case No. 12-CV-411 JHP PJC) [Report, Supplemental Report & Deposition]

Appendix B

10. Carl O. Gurecky, Plaintiff v. Zachry Exploration LLC and Zachry Exploration, Ltd., Defendants (In the District Court Colorado County, Texas 25th Judicial District, Cause No. 23755) [Designation]
11. Roy McMullen, Plaintiff v. Quad/Graphics Marketing, LLC, Defendant (In the United States District Court in and for the Eastern District of Texas, Lufkin Division, Case No. 9:15-cv-00040-MHS) [Report]
12. Elster Oil and Gas, LLC, Claimant v. Extraction Oil and Gas, LLC, Respondent (American Arbitration Association, Case No. 01-15-0004-0836) [Report]
13. Expro Engineering, Inc., Panther City Exploration Company, LLC, and Trinity East Energy, LLC, Plaintiffs v. Weatherford International, LLC and Texas CES, Inc. d/b/a Basin Tool Company, Shale Tank Truck, and Mercer Well Service, and National Oilwell DHT, LP d/b/a National Oilwell Varco DHT, LP, Defendants (In the 68th Judicial District of Dallas County, Texas, Cause No. DC-14-13868) [Report]
14. Tony R. Whisenant, on behalf of himself and all others similarly situated, Plaintiffs v. Strat Land Exploration Co., Defendant (In the District Court of Beaver County, State of Oklahoma, Case No. CJ-2014-4) [Report & Hearing Testimony]
15. D&D Cajun Ventures, LLC and Eileen H. Baur, Plaintiffs v. Atlantic Richfield Company; Arco Oil & Gas Co.; Vista Resources, LLC; Cody Energy, LLC; Cabot Oil & Gas Corporation; Union Oil Company of California; Dunhill Exploration and Production, LLC; Dune Energy, Inc.; Brammer Engineering, Inc.; Phoenix Exploration Company, LP; White Oak Energy, LLC; White Oak Operating Company, LP; Newfield Exploration Company; Goldking Texas, Inc.; Texaco Exploration and Production, Inc.; Chevron USA, Inc.; Pan-Ok Production Company, Inc.; Henry Production Company; KMC Energy, LLC; and Bay Holdings, LLC, Defendants (in the 15th Judicial District Court of Vermilion Parish, State of Louisiana, Case No. 87,694) [Report & Deposition]
16. Fremak Industries, Inc., Claimant v. ISMT Limited, Respondent (International Court of Arbitration Case No. 20784/RD) [Report & Arbitration Testimony]
17. Lancaster Management Services, Inc., Plaintiff v. Chad Scott Nall, individually and d/b/a Setnique Tradeshow Services, and Your Labor Management, LLC, Defendants (In the District Court of Dallas County, Texas, 298th Judicial District, Case No. DC-15-08144) [Report, Supplemental Report & Hearing Testimony]
18. Prime Natural Resources, Inc., Plaintiff v. Certain Underwriters at Lloyd's London, Syndicate Numbers 2020, 1084, 2001, 457, 510, 2791, 2987, 3000, 1221, 5000, Navigators Insurance Company, UK, Defendants (In the District Court of Harris County, Texas, 281st Judicial District, Cause No. 2015-51137) [Designation, Report & Deposition]

Appendix B

19. Certain Underwriters at Lloyd's London and Certain Insurance Companies, Manti Exploration, LP, Shoreline Southeast, LLC, Ankor E&P Holdings Corporation, Dune Properties, Inc., Manti Exploration Operating, LLC, San Isidro Development Co., LC, Leeville West Energy, LLC, CC Bay, LLC, Winn Exploration Co., Inc., C. Douglas Jamba, LLC, D&C Energy Resources, Inc., Plaintiffs v. United States Steel Corporation and United States Steel Tubular Products, Inc., Defendants. (In the District Court of Lafourche Parish, State of Louisiana, 17th Judicial District, Cause No. 125577) [Report, Supplemental Report]
20. Robert E. Lee, Jr., Hitch Land & Cattle Company, and Suzanne V. Landess, Trustee of the Suzanne V. Landess Revocable Trust, Plaintiffs v. ConocoPhillips Company, Defendant. (In the United States District Court for the Western District of Oklahoma, Case No. CIV-14-01391-D) [Report & Deposition]
21. Duncan Frank, on behalf of himself and all others similarly situated, Plaintiffs v. Crawley Petroleum Corporation, Defendant. (In the United States District Court for the Western District of Oklahoma, Case No. CIV-13-01193-R) [Report]
22. Portal Investments, LLC, Claimant v. Rival Holdings LLC, Douglas L. Johnson, Chad D. Johnson, Todd J. Johnson, Respondents. (JAMS Arbitration, Case No. 16372) [Report, Supplemental Report, Arbitration Hearing Testimony]
23. Chuck Travis Cowan, on behalf of himself and all others similarly situated, Plaintiff v. Devon Energy Corporation; and Devon Energy Production Company, LP (including affiliated predecessors and affiliated successors), Defendants. (In the District Court of Pittsburgh County, State of Oklahoma, Case No. CJ-2016-242) [Deposition]
24. Occidental Energy Marketing, Inc. and Oxy Ingleside LPG Pipeline, LLC, Plaintiffs v. NuStar Logistics, L.P., Defendant. (In the District Court of Harris County, Texas, 11th Judicial District, Cause No. 2015-39021) [Report]
25. Ryder Truck Rental, Inc., d/b/a Ryder Transportation Services, Plaintiff v. Maalt LP, et al, Defendants. (In the United States District Court for the Northern District of Texas, Dallas Division, Civ Action No. 3:15-CV-3325-N) [Report, Deposition, Trial Testimony]
26. Sutter Ranch Corporation, and Oklahoma corporation and Sutter Ranch Mineral Trust, Plaintiffs v. Cabot Oil & Gas Corporation, Lime Rock Resources, Apache Corporation, Defendants. (In the District Court of Ellis County, State of Oklahoma; Case No. CJ-2015-7) [Report]
27. Sutter Ranch Corporation, and Oklahoma corporation and Sutter Ranch Mineral Trust, Plaintiffs v. Cabot Oil & Gas Corporation, Lime Rock Resources, Apache Corporation, Defendants. (In the District Court of Ellis County, State of Oklahoma; Case No. CJ-2015-7) [Report]
28. Sutter Ranch Corporation, and Oklahoma corporation and Sutter Ranch Mineral Trust, Plaintiffs v. Cabot Oil & Gas Corporation, Lime Rock Resources, Apache Corporation, Defendants. (In the District Court of Ellis County, State of Oklahoma; Case No. CJ-2015-7) [Report]

Appendix B

29. KMD Operating Company, LLC, KMD Acquisitions, LLC, and California Resources Production Corporation, Claimants v. Innex California, Inc. and General Crude Company, Inc., Respondents. (Matter of Arbitration, CPR File No. G-16-32-C) [Report, Supplemental Report, Arbitration Hearing Testimony]
30. Ashcraft Group, LLC for itself and all others similarly situated, Plaintiffs v. Silver Creek Oil & Gas, LLC, Defendant. (In the United States District Court for the Eastern District of Oklahoma; Case No. 16-CV-388-RAW) [Report, Deposition]
31. Stellar Oil & Gas, LLC, Plaintiff v. BlueCrest Cosmopolitan, LLC, Defendant. (In the District Court of Harris County, Texas, 80th Judicial District, Cause No. 2017-04220) [Report]
32. Michael Kernen for himself and all others similarly situated, Plaintiffs v. Casillas Operating, LLC and Casillas Petroleum Corporation, Defendants. (In the District Court of Garvin County, State of Oklahoma, Case No. CJ-17-186) [Declaration, Deposition]
33. Antero Resources Corporation, Plaintiff v. Washington Gas Light Company and WGL Midstream, Inc., Defendants. (In the District Court of the City and County of Denver, Colorado, Case No. 2017CV33930) [Report, Supplemental Report, Updated Supplemental Report]
34. State of Oklahoma *ex rel.*, Commissioners of the Land Office, Plaintiff v. Apache Corporation, Defendant. (In the District Court in and for Beckham County, State of Oklahoma, Case No. CJ-17-1) [Declaration]
35. Richard L. Kuffa and Denise D. Kuffa, Claimants v. Statoil USA Onshore Properties, Inc. f/k/a StatoilHydro USA Onshore Properties, Inc., Respondent. (American Arbitration Association, Scranton, Pennsylvania, Case No. 1-17-0005-6012) [Report, Deposition]
36. San Isidro Development Company, LC and San Isidro Energy Company, LLC, Plaintiffs v. BHP Billiton Petroleum Properties (N.A.), LP F/K/A Petrohawk Properties, LP, et al, Defendants. (In the 36th Judicial District Court of McMullen County, Texas, Cause No. M-15-0050-CV-C) [Disclosure]

Chieftain Royalty Company v. SM Energy Company, et al.

Documents Received by Eric Krause

Beginning Bates Number	Ending Bates Number	Date	Document Description
Bates Numbered Documents			
Chieftain-SM 002083	Chieftain-SM 002087		
Chieftain-SM 002088			
Chieftain-SM 002095	Chieftain-SM 002097		
Chieftain-SM 002098	Chieftain-SM 002099		
SM.016262	SM.016274		
SM.0248379	SM.0248398		
SM.0248448	SM.0248461		
SM.026935	SM.027040		
SM.260935	SM.261080		
SM.338000A			
SM.403816			
SM_00005247			
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SM000040	SM000055		
SM000056	SM000058		
SM000091	SM000102		
SM000103	SM000118		
SM000119	SM000133		
SM000134	SM000138		
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SM000677	SM000689		
SM000694	SM000708		
SM000709			
SM000716	SM000730		
SM000732	SM000755		
SM000846	SM000853		
SM000862	SM000898		
SM000915	SM000928		
SM000929			
SM000953			
SM000958	SM000974		
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SM001087	SM001097		
SM001101	SM001113		
SM001126	SM001163		
SM001164	SM001198		
SM001234	SM001243		

Chieftain Royalty Company v. SM Energy Company, et al.

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SM001382	SM001394		
SM001424	SM001432		
SM001872	SM001902		
SM001903	SM001911		
SM001920	SM001930		
SM001931	SM001972		
SM001993	SM002058		
SM002107	SM002246		
SM002247	SM002261		
SM002291	SM002312		
SM002371	SM002382		
SM002383	SM002386		
SM002396	SM002414		
SM002415	SM002422		
SM002447	SM002467		
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SM002517	SM002523		
SM002528	SM002538		
SM002539	SM002566		
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SM002795	SM002806		
SM002807	SM002816		
SM002817	SM002845		
SM002935	SM002945		
SM002946			
SM002965	SM002978		
SM002987	SM003001		
SM003002	SM003006		
SM003008	SM003018		
SM003039	SM003055		
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SM003431	SM003433		
SM003441	SM003453		
SM003463	SM003478		
SM003479	SM003503		
SM003504	SM003566		
SM003597	SM003602		
SM003612	SM003625		
SM003689	SM003693		
SM003740	SM003750		
SM003751	SM003758		

Chieftain Royalty Company v. SM Energy Company, et al.

Documents Received by Eric Krause

Beginning Bates Number	Ending Bates Number	Date	Document Description
SM003761	SM003772		
SM003779	SM003814		
SM004127	SM004132		
SM005021	SM005025		
SM005033	SM005069		
SM005070			
SM005071	SM005075		
SM005076	SM005093		
SM005094	SM005120		
SM005121	SM005147		
SM005148	SM005168		
SM005169	SM005184		
SM005186	SM005204		
SM005205	SM005216		
SM005217	SM005246		
SM-005255	SM-005256		
SM-005257			
SM005285			
SM-008237			

Case Law & Code

52 Okl.St. Ann. Sec. 570.12
Billy J. Strack, et al. v. Continental Resources, Inc.
Howell v. Texaco, Inc.
L. Ruth Fawcett v. Oil Producers, Inc. of Kansas
 Order and Judgment (*Chieftain Royalty Company v XTO Energy, Inc.*)
Tony R. Whisenant v. Strat Land Exploration Co.

Court Documents and Correspondence

10/2/2017	Defendant SM Energy Company's Motion for Protective Order and Brief in Support
10/5/2018	Expert Report of Alyce Hoge with Exhibits
10/5/2018	Expert Report of Barbara A. Ley with Exhibits
10/5/2018	Expert Report of Daniel T. Reineke with Exhibits
7/2/2012	Expert Report of Kris L. Terry with Exhibits
12/4/2018	Expert Report of Kris L. Terry
12/4/2018	Expert Report of Kyle Pearson
8/31/2012	First Amended Complaint
4/10/2017	Order
11/28/2017	Order
2/22/2011	Petition
6/29/2016	Plaintiff's Amended Supplemental Response to Interrogatory No. 8
10/1/2012	Rebuttal Expert Report of Kris L. Terry with Exhibits
9/18/2014	Second Amended Complaint
2/21/2017	Third Amended Complaint with Exhibits

Depositions and Exhibits

4/30/2012	Deposition Transcript of David Whitcomb with Exhibits
7/11/2018	Deposition Transcript of Kris Terry with Exhibits
5/2/2012	Deposition Transcript of Robert Abernathy with Exhibits
5/8/2012	Deposition Transcript of Thomas Ferguson with Exhibits

Publicly Available Document

1/20/2014	FourPoint Energy and EnerVest Agree to Partner in the Anadarko Basin, PNRnewswire
11/5/2013	SM Energy - SM Energy Enters into Agreement to Divest Anadarko Basin Assets, sm-energy.com

Other Documents

482508AA_LEASE
 484828D_LEASE
 484836AR_LEASE
 492548_LEASE

Chieftain Royalty Company v. SM Energy Company, et al.
Documents Received by Eric Krause

Beginning Bates Number	Ending Bates Number	Date	Document Description
			Final Retained Lease List - September 9 - Plaintiff.xlsx
			Gas Quality Data 2006-2013
			Missing_BA_Mapping.csv
			Plant Statements Marketing Data 2008-2013